REMARKS

Please reconsider the present application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering the present application.

I. Disposition of Claims

Claims 1-15 are currently pending in the present application. By way of this reply, claims 1, 12 and 13 have been amended.

II. Claim Amendments

Claim 1 has been amended to clarify that the signal driver generates a signal "on a signal path" and that the first wire is disposed adjacent to the "signal path." No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figure 3a of the present application.

Claim 12 has been amended to clarify that the driving means generates a signal "on a signal path." No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figure 3a of the present application.

Claim 13 has been amended to recite that the method referred to in claim 13 is for driving a signal "on a signal path." Further, claim 13 has been amended to replace the instance of "after a signal has transitioned" with "after the signal on the signal path has transitioned" in order to be consistent with the other amendments to claim 13. Further, claim 13 has been amended to replace the instance of "wire shield" with "wire shields."

No new matter has been added by way of these amendments as support for these amendments may be found, for example, in Figure 3a of the present application.

III. Amendments to the Drawings

Figure 1 has been amended to replace the reference number **12** for the lower right integrated circuit block with the reference number **16**. A replacement sheet showing corrected Figure 1 has been submitted with this reply. Accordingly, acceptance of corrected Figure 1 as shown in the enclosed replacement sheet is respectfully requested.

IV. Objection(s) to the Claims

Claims 1, 12, and 13 were objected to as containing minor informalities. By way of this reply, claims 1, 12, and 13 have been amended as indicated above in the "Claim Amendments" section to correct the informalities cited by the Examiner. Accordingly, withdrawal of the objections to the claims is respectfully requested.

V. Rejection(s) Under 35 U.S.C § 102

Claims 1-5, 7, and 12-15 of the present application were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,184,702 issued to Takahashi et al. (hereinafter "Takahashi"). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is generally directed to a technique for shielding a signal line. *See* Specification, paragraph [0018]. With reference to the exemplary embodiment of the present invention shown in Figure 3a of the present application, shield control

circuitry **48** drives a shield **44** to a voltage potential such that a subsequent transition on the signal **42** causes a discharge event (*i.e.*, a discharge of capacitors **46** due to substantially equal voltage potentials at terminals of capacitors **46**). *See* Specification, paragraph [0022]. For example, if the signal **42** is initially "low," and then subsequently the signal driver **40** causes the signal **42** to transition to "high," the shield control circuitry **48**, prior to the signal driver **40** driving the signal **42** "high," sets the value of the shield wires **44** "high" to ensure that the transition of the signal **42** to "high" causes a discharge event. *See* Specification, paragraph [0022]. Alternatively, if the signal **42** is initially "high," and then subsequently the signal driver **40** causes the signal **42** to transition to "low," the shield control circuitry **48**, prior to the signal driver **40** driving the signal **42** "high," sets the value of the shield wires **44** "low" to ensure that the transition of the signal **42** to "low" causes a discharge event. *See* Specification, paragraph [0022].

The behavior associated with the shielding technique described above is further reflected in the exemplary timing diagram shown in Figure 3b of the present application. As evident to one of ordinary skill in the art, Figure 3b shows that a transition (*e.g.*, **60**, **64**) on the signal (**42** in Figure 3a of the present application) causes a discharge event.

Accordingly, the present invention requires, in part, that: (1) shield control circuitry generate a value on the shield wire such that a transition on the signal causes a discharge of capacitance between the shield wire and the signal as recited in amended independent claim 1 of the present application, (2) shielding control means actively control a value on wires shielding that signal such that the driving means only participates in discharge events as recited in amended independent claim 12 of the present application, and (3) after a signal has transitioned to a first voltage potential, a

decoupling capacitor be charged by driving a shield wire to a second voltage potential so that the decoupling capacitor is discharged when the signal transitions to the second voltage potential as recited in amended independent claim 13 of the present application.

Takahashi, in contrast to the present invention, fails to disclose all the limitations recited in amended independent claims 1, 12, and 13 of the present application. Takahashi is directed to a crosstalk prevention circuit (*see* Takahashi, Abstract), not to a technique for non-interactively driving a signal by ensuring that the signal driver does not participate in charging events as described in the present application (*see* Specification, paragraph [0019]). With reference to Figure 10 of Takahashi, a crosstalk prevention circuit as described in Takahashi has a test clock signal **13** disposed between a master clock signal **11** and a slave clock signal **12**. *See* Takahashi, column 6, lines 60 – 65. During normal operations, the test clock signal **13** is grounded, and therefore serves as a static shield between the master clock signal **11** and the slave clock signal **12**. *See* Takahashi, column 6, line 66 – column 7, line 4 (stating that in normal operations, the test clock signal **13** "does not influence normal operation"). In other words, during normal operations, the purported shield wire formed by test clock signal **13** does not transition at all, which is contrast to the behavior of the shield wire(s) recited in amended independent claims 1, 12, and 13 of the present application.

Moreover, the timing diagrams shown in Figure 10 of Takahashi make it clear that Takahashi is associated with a crosstalk prevention circuit and fails to disclose the limitations of amended independent claims 1, 12, and 13 of the present application. The timing diagrams show that during normal operations, the purported shield formed by the test clock signal **1tt** does not transition at all, and thus, the purported shield of Takahashi

cannot meet the limitations recited in amended independent claims 1, 12, and 13 of the present application, which require that the voltage potentials of the shield wires be dynamically controlled.

Further, the timing diagrams shown in Figure 10 of Takahashi show that during test mode operations, the purported shield wire formed by test clock signal **1tt** is, at various points, at a "low" voltage potential when the slave clock signal **1st** (the master clock signal **1mt** is inactive during test mode operations) transitions to a "high" voltage potential. Therefore, referring back to the crosstalk prevention circuit shown in Figure 10 of Takahashi, when the slave clock signal **12** transitions "high," capacitor C_{C2} is actually charged up due to the test clock signal **13** being at a "low" voltage potential. Thus, the transition of the test clock signal **13** actually results in a charging event. Such behavior of the crosstalk prevention circuit of Takahashi is in clear contrast to the present invention as recited in amended independent claims 1, 12, and 13 of the present application, which require that transitions on the signal result in discharge events.

In view of the above, Takahashi fails to show or suggest the present invention as recited in amended independent claims 1, 12, and 13 of the present application. Thus, amended independent claims 1, 12, and 13 of the present application are patentable over Takahashi. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

VI. Rejection(s) Under 35 U.S.C § 103

Claims 6 and 8-11 of the present application were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 6,285,208 issued

to Ohkubo (hereinafter "Ohkubo"). For the reasons set forth below, this rejection is respectfully traversed.

Like Takahashi, Ohkubo fails to disclose all the limitations recited in amended independent claim 1 of the present application. Ohkubo, which is directed to a technique for connecting circuit blocks by providing interline capacitances to parasitically accompany signal wiring lines to the circuit blocks, is altogether not concerned with ensuring that transitions on a signal result in discharge events. For example, in Figure 5 of Ohkubo, when input **IN1** is "high," the first input to the NAND gate **W1** is "low," thereby causing the NAND gate **W1** to output "high" onto the shield wire **S1**. In this case, if input **IN2** goes "low," then buffer circuit **B21** outputs "low" onto the signal **F2**, thereby actually resulting in a charging event due to capacitor **102** being charged up as a result of one terminal of capacitor **102** being connected to the "high" shield wire **S1** and the other terminal of capacitor **102** being connected to the "low" signal **F2**. Thus, Ohkubo fails to disclose or teach the control of a shield wire so as to ensure that a transition on a signal shielded by the shield wire results in a discharge event as required by amended independent claim 1 of the present application. Accordingly, Ohkubo fails to disclose those limitations of amended independent claim 1 of the present application not disclosed or taught in Takahashi.

In view of the above, Takahashi and Ohkubo, whether considered separately or in combination, fail to show or suggest the present invention as recited in amended independent claim 1 of the present application. Thus, amended independent claim 1 of the present application is patentable over Takahashi and Ohkubo. Dependent claims 6 and 8-11 are allowable for at least the same reasons. Accordingly, withdrawal of this

rejection is respectfully requested.

VII. Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03226.158001;P6867).

Respectfully submitted,

Date: 1/28/04

Jonathan P. Osha, Reg. No. 33,986
ROSENTHAL & OSHA L.L.P.
1221 McKinney Street, Suite 2800
Houston, TX 77010

Telephone: (713) 228-8600
Facsimile: (713) 228-8778

58275_1